

August 20, 2015



Miller Valentine Residential Development, LLC  
9349 Waterstone Boulevard  
Suite 200  
Cincinnati, Ohio 45249

Attn: Mr. Charles A Rulick  
P: 980-613-8109  
E: [charles.rulick@mvg.com](mailto:charles.rulick@mvg.com)

RE: **Supplemental Proposal for Additional Sampling Services**  
Davidson Depot  
301 Depot Street  
Davidson, North Carolina 28203  
Terracon Proposal No. P71150239r1a

Dear Mr. Rulick:

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit this supplemental proposal to provide additional soil sampling for preliminary geotechnical engineering services for the above referenced project. The purpose of this study will be to more clearly determine pertinent geotechnical conditions at the site, including the extent of potential asbestos within proposed areas of excavation (excluding the existing landfill on the west side of the property). This proposal outlines our understanding of the project and scope of services and provides a lump sum fee for our services.

## A. PROJECT INFORMATION

### Site Location

ITEM	DESCRIPTION
Location	This project site is at the Davidson Depot located at 301 Depot Street in Davidson, North Carolina.
Existing development	The property includes the existing Davidson Depot buildings, parking areas, abandoned building foundations, and a known capped landfill area containing asbestos materials.
Current ground cover	Manicured grass areas and asphalt parking and drive areas.
Existing topography	The site generally slopes from a high of 814 feet on the eastern portion of the site to a low of 780 feet on the western portion of the site. The landfill area is at an approximate elevation of 780 feet and is believed to be up to 20 feet deep.



## Project Description

ITEM	DESCRIPTION
<b>Structures</b>	Four-story, commercial use and multi-family residential buildings, a pool, and associated access drives and parking areas.
<b>Building construction</b>	Wood-framed construction for the multi-family structures and masonry construction for the commercial structures (anticipated). Concrete slab-on-grade.
<b>Finished floor elevation</b>	Unknown at this time. Assumed close to be near existing grades.
<b>Maximum loads (assumed)</b>	Columns: 100 to 250 kips. Walls: 3 to 5 klf. Slabs: 150 psf.
<b>Grading</b>	Unknown at this time. Assumed to be less than 10 feet of cut/fill.
<b>Cut and fill slopes</b>	Unknown at this time. Assumed to be no steeper than 3H:1V (Horizontal to Vertical)
<b>Free-standing retaining walls</b>	Yes (assumed).
<b>Below grade areas</b>	Yes (assumed).
<b>Potential environmental hazards</b>	It is anticipated that asbestos debris may be encountered in the landfill area located on the western portion of the site, and may be encountered throughout the site.

Should any of the above information or assumptions be inconsistent with the planned construction, please let us know so that we may make any necessary modifications to this proposal.

## B. SCOPE OF SERVICES

Miller Valentine Residential Development, LLC., has requested additional sampling in areas of the site proposed for undercutting, including onsite stormwater detention, utility excavation, foundations, etc. The services to be provided by Terracon are summarized in the following paragraphs:

Field Program: Based on the project information and plans provided, we propose to perform twelve (12) soil test borings to depths ranging from 5 to 15 feet each (or auger refusal, if shallower) below existing grades. Rock coring is not planned, nor included in this scope of services. The proposed borings locations and anticipated depths are indicated on the attached sampling layout. A total of 115 feet of drilling is anticipated during this portion of work.

Up to 24 asbestos bulk samples will be analyzed by Polarized Light Microscopy.

Our fee is based on the site being accessible to our truck-mounted drilling equipment and Terracon providing layout of the borings; additional costs may result if this is not the case. It



does not include services associated with wet ground conditions, damage of existing landscape or location of underground utilities beyond contacting a "one-call" locate service. If such conditions are known to exist on the site, Terracon should be notified so that we may adjust our scope of services and fee, if necessary.

Sampling will be in general accordance with industry standard procedures wherein split-barrel samples (SPT) are obtained. Four SPT samples will be obtained in the upper ten feet of each boring and at intervals of about five feet thereafter. Upon completion of drilling the borings and observation of groundwater levels the boreholes will be backfilled with soil cuttings. Once the samples have been collected and classified in the field, they will be placed in appropriate sample containers for transport to our laboratory.

It is anticipated that asbestos debris may be encountered during the drilling operations. Terracon will provide a North Carolina accredited Asbestos Inspector on the site for the duration of the drilling operations. Our inspector will serve as the competent person required by the OSHA Asbestos Construction Standard, 29 CFR 1926.1101. Terracon anticipates collecting up to two (2) bulk samples at each boring location (24 total samples). These samples will be analyzed by Polarized Light Microscopy (PLM) with dispersion staining techniques per USEPA methodology EPA/600/R-93/116.

It is anticipated that the asbestos debris that will be encountered during drilling operations will be non-friable roofing materials. Asbestos fibers in non-friable materials are bound in the matrix of the material and do not release fibers unless they are crushed, ground, or abraded; therefore, the potential for asbestos fiber release during this geotechnical assessment is low. Even though there is a low risk of asbestos fiber release, Terracon will use the following precautions to protect our workers and the general public from exposure to asbestos fibers as a result of our geotechnical assessment.

- Each work area will be marked by using red barrier tape and warning signs required by OSHA.
- Terracon workers will be trained as required by the OSHA Asbestos Construction Standard.
- Only personnel with proper OSHA training will be allowed in the marked work area.
- During drilling operations, wet methods will be used to control the release of asbestos fibers. Wet methods will prevent release of asbestos fibers into the atmosphere.
- As an added precaution, Terracon will provide protective suits and respirators for use by our employees when suspect asbestos debris is encountered.

- Disposal of Waste – Tailings from the boring locations will be pushed back into the bore hole. Excess tailings that do not go back into the bore hole will be properly disposed (offsite) as asbestos waste. The top two feet of the bore hole will be capped with clean fill.
- Terracon will comply with the requirements of the OSHA Asbestos Construction Standard 29 CFR 1926.1101.

The geotechnical scope of services for this project does not include, either specifically or by implication, any environmental assessment of the site intended to identify or quantify potential site contaminants. If the client and/or owner is concerned about the potential for such contamination, an environmental site assessment should be conducted.

Conditions/Items to be provided by Client: Items to be provided by the client include the right of entry to conduct the exploration and an awareness and/or location of any private subsurface utilities existing in the area. We will contact North Carolina One Call for location of utilities in public easements. We will also contact a private utility locator to aid in identifying existing private utilities in the vicinity of the proposed boring locations. Location of private lines on the property is not part of the North Carolina One Call, and all private lines should be marked by others prior to commencement of drilling.

Terracon will take reasonable efforts to reduce damage to the property, such as rutting of the ground surface. However, it should also be understood that in the normal course of our work some such disturbance could occur. We have not budgeted to restore the site beyond backfilling our boreholes. If there are any restrictions or special requirements regarding this site or exploration, these should be known prior to commencing field work.

For safety purposes, all borings will be backfilled immediately after their completion. Excess auger cuttings will be disposed on the site. Because backfill material often settles below the surface after a period of time, we recommend the boreholes be checked periodically and backfilled if necessary. We could provide this service at your request or grout the holes, but this would involve additional cost.

Engineering Analysis and Report: The results of our field testing program will be evaluated by a professional geotechnical engineer licensed in the State of North Carolina. Based on the results of our evaluation and the geotechnical exploration data, an engineering report will be prepared that details the results of the testing performed, provides soil test boring logs, and a diagram of the site/boring layout. Our report will include the following:

- Computer generated boring logs with soil stratification based on visual soil classification
- Groundwater levels observed during and immediately after completion of drilling
- Boring location plan
- Subsurface exploration procedures
- Encountered soils conditions
- Preliminary foundation recommendations



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- Comments regarding subsurface conditions that could potentially impact the project
- Asbestos bulk sampling results
- Estimated cost for disposal of asbestos waste
- Recommendation for additional geotechnical and asbestos services in order to provide Final Design Recommendations

Schedule: We can begin the field exploration program within about four weeks after receipt of our written authorization, depending on driller availability and if weather conditions permit. Field explorations will take one to three days depending on site access and weather conditions. Laboratory testing is estimated to take one to two weeks. We estimate the geotechnical report can be completed in about one to two weeks after the laboratory testing is completed. In situations where information is needed prior to submittal of our reports, we can provide verbal information or recommendations for specific project requirements after we have completed our field program.

We appreciate the opportunity to provide this proposal and look forward to working with you on this project. If you have any questions or comments regarding this proposal or require additional services, please call us at (704) 509-1777.

Sincerely,  
**Terracon Consultants, Inc.**

A handwritten signature in blue ink, reading "Janette M. Prosser". The signature is fluid and cursive, with the first name being the most prominent part.

Janette M. Prosser, P.E.  
Senior Engineer

A handwritten signature in blue ink, reading "Michael W. Schrum". The signature is fluid and cursive, with the first name being the most prominent part.

Michael W. Schrum, P.E.  
Senior Principal

Attachments: Davidson Depot – Additional Sampling Layout



# Davidson Depot

Additional Sampling Layout

## Legend

- B-01 thru B-08 (July 2015)
- B-09 thru B-20 (Proposed borings/depth)

